

Listing of Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Previously Presented) A surface-mountable miniature luminescent diode or photodiode comprising:

a chip package which has a leadframe; and

a semiconductor chip which is arranged on, and is in electrical contact with, the leadframe and which comprises a first contact area, a second contact area, and at least one of an active, radiation-emitting region and radiation-receiving region;

wherein the leadframe is formed by a flexible multi-layered sheet comprising:

a metal foil comprising a first chip connection region and a second chip connection region, the first contact area of the semiconductor chip being disposed on the first chip connection region and the second contact area of the semiconductor chip being coupled to the second chip connection region; and

a plastic film arranged on, and connected to, the metal foil, the plastic film defining a plurality of openings in regions arranged on the first and the second chip connection regions; and

wherein the semiconductor chip is mounted in one of the plurality of openings of the plastic film with the first contact area contacting the first chip connection region.

2. (Canceled).

3. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the plastic film is adhesively bonded to the metal foil.

4. (Canceled).

5. (Canceled).

6. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the thickness of the metal foil is less than 80 μm .

7. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the plastic film comprises an epoxy resin film.

8. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, the thickness of the plastic film is less than 80 μm .

9. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the semiconductor chip is embedded in an encapsulating material.

10. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the leadframe has footprint dimensions of approximately $0.5\text{ mm} \times 1.0\text{ mm}$ or less.

11. (Previously Presented) The surface-mountable miniature luminescent diode or photodiode as claimed in claim 1, wherein the luminescent diode has a total thickness of approximately 400 μm or less.

12. (Previously Presented) A method for producing a surface-mountable miniature luminescent diode or photodiode, comprising:

providing a leadframe from a flexible multi-layered sheet which has a first chip connection region and a second chip connection region, the flexible multi-layered sheet comprising a thin metal foil and a plastic film, the plastic film being arranged on, and connected to, the metal foil, and having a plurality of openings in the regions arranged on the chip connection regions;

providing a semiconductor chip, which contains an active, radiation-emitting region and has a first contact area and a second contact area;

mounting the semiconductor chip in one of the plurality of openings of the plastic film with the first contact area contacting the first chip connection region of the leadframe;

connecting the second contact area to the second chip connection region of the leadframe;
and

encapsulating the semiconductor chip with a transparent or translucent encapsulating material.

13. (Previously Presented) The method as claimed in claim 12, wherein the step of providing a leadframe comprises punching the thin metal foil in order to define the first and second chip connection regions.

14. (Previously Presented) The method as claimed in claim 13, wherein the step of providing a leadframe comprises punching the thin plastic film in order to define openings for the electrical connection of the semiconductor chip.

15. (Previously Presented) The method as claimed in claim 14 wherein the step of providing a leadframe comprises the adhesive bonding of the foil and the film.

16. (Previously Presented) The method as claimed in claim 12, wherein, in the encapsulating step, the encapsulating material is injection-molded, transfer-molded or sprayed onto the plastic film of the multi-layered sheet

17. (Previously Presented) The method as claimed in claim 12, wherein, in the encapsulating step, a runner is led through a plurality of chips arranged on the multi-layered sheet.

18. (Previously Presented) The method as claimed in claim 12, wherein the first and second chip connection regions of the leadframe are short-circuited and grounded in the steps of mounting the semiconductor chip, connecting the second contact area and encapsulating the semiconductor chip.

19. (Previously Presented) The method as claimed in claim 12, wherein a plurality of chips arranged on the multi-layered sheet are tested for their functional capability after the encapsulating step and in that, for this purpose, the individual chips are electrically isolated when they are mounted.